Unit Commanders Course
Student Guide

Problem Solving

Lesson Objective:	Comprehend how to use the problem solving model in command situations.
Behavioral Objectives: At the end of this segment you will be able to:	1. Describe the problem solving model. 2. Solve a sample problem using the model.

Overview

A fundamental skill for both command and life management is problem solving. We solve problems of one sort or another everyday. This segment is designed to make you more aware of the problem solving process through examining the classic problem solving model.

First, you will learn the six steps in problem solving, then you will practice the skills you've learned by solving a sample problem. Though we want you to take a decent crack at solving the problem, remember that the focus of this segment is to get you to learn and practice organized problem solving, so concentrate on using the six steps, and see how they relate to one another.

Finally, your instructor will lead a class critique of your application of problem solving techniques. This will be your opportunity to see how well you can apply those techniques and ask questions about how you can better prepare yourself to both oversee the problem solving process as the commander of your unit, and apply it as part of a group when trying to solve problems which affects CAP at higher levels of command.

The Problem Solving Model

Let's imagine that you have just looked at your watch on a busy Monday afternoon at work. It's 12:00 and you still have some work in your in box. However, your starving, and if you hear the telephone ring one more time you feel like you will have a fit. Sound familiar? Your best friend has just walked in and asked you if you want to go out to lunch. What do you do? Using this scenario, we will now examine the six steps in the problem solving model.

a. ***Recognize the problem.*** Before you solve a problem, you must first recognize what it is. Obviously, in this scenario the problem is if you should go to lunch. A problem has three elements: an individual, an obstacle, and a goal. No matter what happens, these three elements may always be present. What are the three elements which make up a problem in this scenario:

1. The individual: In this case there are two, you, and your friend who just asked you to lunch, but the primary individual is you. You must make the decision, your friend can't make it for you.

2. The obstacle. The obstacle in this case is your work load. It's a busy Monday, and you feel a little behind. And, as implied in the scenario, you are feeling a little stressed.

3. The goal. Your goal is to leave and go to lunch, if possible.

Now, lets take these three elements and convert them into a question or statement which illustrates the problem. Your problem is: You are hungry and need to get out of the office for while, but you feel behind. You want to go to lunch and not get farther behind.

The Problem Solving Model Process

- Recognize the problem
- Gather data
- List possible solutions
- Test possible solutions
- Select the best solution
- Implement the solution

b. ***Gather data.*** Now that you've established your problem, it's now time to gather the facts. Time to weigh everything that affects the decision around you. Sometimes the best way to figure this out is to answer a series of questions. For instance: Do you have really short deadlines? Does this work require a lot of concentration? If so, by leaving for awhile will you increase your concentration when you come back, or lose it for the rest of the day? Do have enough money to eat out? If you decide to go with your best friend, is he or she planning to have a long lunch, or just go across the street for a quick hamburger? What are some more things to consider?

Notice that everything we've just mentioned can fall into several categories of data: **facts, assumptions, boundaries, criteria, and definitions**. When you gather your data, be sure to find all the data which affects the problem, and not just the data which will support what you want at the time. It may not seem important at the time, but it could have a big impact on what happens when you make a decision.

c. ***List possible solutions.*** Now it's time to think about what you CAN do. Brainstorm all the possible solutions you can think of (this works especially well in a group setting). It's important that during this phase you don't eliminate anything. This will limit your creativity. Remember, when listing solutions (brainstorming), anything goes.

For the problem listed above, several possible solutions are: (1) go to lunch with your friend, no matter how long it takes, because you need a break; (2) go with your friend, but ask him or her to please make it a little quicker, because, you want to get back; (3) stay in your office, but just close your door for a while to give yourself some time alone; (4) walk around the block, or to the coffee machine; or, (5) just continue on with your work. What others can you think of?

d. ***Test possible solutions.*** When you test your solutions, you evaluate what you thought of against the problem itself, and the supporting data which you came up with in Step 2. This process eliminates those ideas which will not necessarily work to achieve your end goal. In this case, your end goal is to go to lunch, and relax a little, but not get behind.

Some of the solutions above will not fit the criteria, such as going with your friend and not caring about when you return; or forgetting lunch altogether. Remember however, that these solutions are not totally out of the question if you change your priorities. Let's assume though, that you won't, so eliminate these possibilities. This leaves you with: asking your friend to make it a quick lunch, taking a quick walk, going to the coffee machine to bring something back so you can close your door for a bit, or whatever you came up with that fit the criteria.

e. ***Select the best solution.*** Now it's time to select the solution which you feel (or your group feels) will work the best. If there is only one solution which works from Step 4, then you are all set. If you have more than one solution, then you now have to take another look at the criteria and whittle the choices down more. Once that's completed, it may come down to a matter of personal preference.

In the problem above, you'll probably take another look at the problem in order to make the decision.

f. ***Implement the solution.*** Now it's time to implement the decision you've made. In a problem such as the one above, implementing the solution is fairly simple. For more complex problems, the solutions may

entail a group effort, complex steps, etc. For those complex decisions, you may feel some doubt. But once you make the decision and begin to implement it, eliminate the doubt from your mind. Back your decision 100%.

If you are part of a working group and are recommending a solution to your commander, this is where you should do so.

We used the problem above to assist us in describing the steps to problem solving for you. The steps in and of themselves are straightforward, and if you examine problems you've solved (or major decisions you've made) recently, you'll see that you use these steps frequently. It's just a matter of refining them, and in the case of command, being able to use these skills to lead your people.

On the next page you will find a sample problem. This is a group exercise in which your instructor (if applicable) will help you put these skills to work. As we said in the beginning, the purpose of this exercise is to practice problem solving skills.

Problem Solving

Sample Problem

EXERCISE OBJECTIVE: Apply what has been learned from the Problem Solving segment and reach a workable solution to the case presented.

You are the commander of the Pricetown Composite Squadron, and have been in the job for 6 months. Your squadron consists of 14 senior members and 22 cadets. Your staff is competent and eager to participate in all facets of the program.

The Cadet Commander on your staff, C/1Lt Steven Spurance, has brought up a question at your monthly staff meeting. He says that the classes held for his cadets utilize video cassettes more and more frequently. When instructors plan to use videos in their classes, they must bring their own VCR and monitor or rent one from a local rental store because the squadron doesn't own its own.

Cadet Spurance wants to know if the squadron can purchase VCR/monitor to both make it easier for the instructors to use video, and make it more fun for his cadets who like the classes more with video.

Everyone thinks it's a good idea until the Finance Officer informs you that the squadron only has $225 in the checking account. Though this disappoints the staff, they still feel that getting a VCR/monitor is a good idea. You agree. How do you and your staff solve this problem?